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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,080	12/05/2000	Kazutaka Saitoh	IIZ.018	3263

7590 05/20/2003

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EXAMINER

THOMPSON, ANNETTE M

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/729,080

Applicant(s)

SAITOH, KAZUTAKA

Examiner

A. M. Thompson

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-6 and 8-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 4-6 and 15-20 is/are allowed.
- 6) ☒ Claim(s) 8, 10, 14, and 21 is/are rejected.
- 7) ☒ Claim(s) 9, 11-13, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 09 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's amendment to 09/729,080 has been examined. The title, specification, and drawings are amended. Claims 2, 3, and 7 are cancelled. Claims 1, 8, 10, 14, 17 are amended. Claims 21-23 are added. Claims 1, 4-6 and 8-23 are pending.

1. Applicant's Amendment is persuasive. However, upon further consideration of the claims, a new ground of rejection has been applied to some claims. Accordingly, prosecution is restarted and this second non-final office action on the merits issues.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rejection of claims 8, 10, 14, and 21

2. **Claims 8, 10, 14, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Mueller et al., U.S. Patent 5,864,496. Applicant's specification discloses the components of a Smart Card (specification, pages 1, 2). Applicant's specification additionally discloses the component ROM of a Smart Card as including first and second layers. However, Applicant's specification is silent on a ROM structure being comprised of diagonal bit lines. Mueller discloses a high density semiconductor memory having diagonal bit lines and dual word bit lines. Mueller uses the exemplary embodiment of a DRAM chip but expands the invention application to other memory structures, such as a ROM, at

column 4, lines 5-10. Smart card designs are small in size and it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to use the Mueller's type of memory design to facilitate a reduction in area.

3. Pursuant to claim 8, which recites [a] smart card comprising a ROM; a CPU using a runnable program. . .; a RAM, which enables the CPU to enter and use the temporary data during its operation, wherein the ROM (col. 3, line 66 to col. 4, line 13) having bit lines extending in a first direction (Fig. 4, #29 illustrates the bit lines running in one direction) in a first layer (col. 6, ll. 26-47; Fig. 6, #25); and a conductive line (the word lines, MWL_j, col. 6, ll. 37-41; see also col. 6, ll. 20-22 which discloses that the word lines are one continuous, electrically conductive line) arranged in a second layer, located above the first layer (Fig. 9 illustrates this configuration of the conductive word lines in a layer above the bit lines), wherein the conductive line partially extends in a second direction which is orthogonal to the first direction, to pass across the bit lines (col. 6, ll. 37-46 discloses that the bit lines are orthogonal to the word lines; see also Fig. 6 which illustrates the layers and the orthogonal directions).

4. Pursuant to claim 10, wherein the conductive line is shaped to pass across the bit lines two or more times (see Fig. 6, where conductive lines pass across bit lines more than once).

5. Pursuant to claim 14, it addresses limitations already rejected by claims 8 and 10 and is therefore likewise rejected based on similar reasoning.

6. Pursuant to claim 21, it addresses limitations already rejected by claims 8 and 10, and is therefore likewise rejected based on similar reasoning.

Allowable Subject Matter

7. Claims 1, 4-6, and 15-20 are allowed.
8. Claims 9, 11-13, 22, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The reasons for the indication of allowable subject matter were previously outlined in Paper No. 2.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to A.M. Thompson whose telephone number is (703) 305-7441. The Examiner can usually be reached Monday thru Friday from 8:00 a.m. to 5:00 p.m.. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew S. Smith, can be reached on (703) 308-1323.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956 or the Customer Service Center whose telephone number is (703) 306-3329.

11. Responses to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

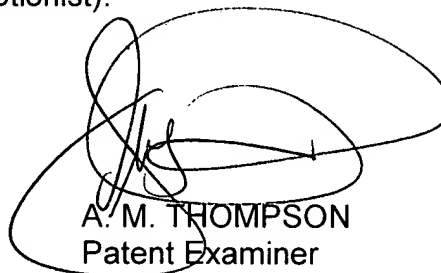
(703) 872-9318, (for **OFFICIAL** communications intended for entry)
(703) 872-9319, (for Official **AFTER-FINAL** communications)

Application/Control Number: 09/729,080

Page 5

Art Unit: 2825

Hand-delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).



A. M. THOMPSON
Patent Examiner

19 May 2003